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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,293	11/18/2005	Rolf Muller	3712161-00088	8643
24573	7590	07/08/2011		
K&L Gates LLP P.O. Box 1135 CHICAGO, IL 60690			EXAMINER MESH, GENNADIY	
			ART UNIT 1763	PAPER NUMBER
			NOTIFICATION DATE 07/08/2011	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chicago.patents@klgates.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,293	<b>Applicant(s)</b> MULLER ET AL.	
	<b>Examiner</b> GENNADIY MESH	<b>Art Unit</b> 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2010 and 27 August 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-29,31-33,35-41,44-49,51,52 and 54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-29,31-33,35-41,44-49,51-52 and 54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1.1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 18, 2010 and August 27, 2010 has been entered.

### ***Status of Claims***

1.2. Claims 1-12, 30, 34, 42-43, 50 and 53 have been canceled by Applicant. Claims 13-29, 31-33, 35-41, 44-49, 51, 52 and 54 are active. Claim 13 has been amended. Support for amendment was found in Specification as indicated by Applicant. Therefore, no New Matter has been added with this amendment.

### ***Response to Amendment***

2. The Declaration submitted by Mr. Muller under 37 CFR 1.132 filed August 27, 2010 is sufficient to overcome the rejections of Record (see Office letter mailed on March 18, 2010).

However, amendment of Claim 13 raise new issue (due to new limitations as specific range of second component P(j) and specific mixing technique ) will require further consideration and search.

Thus, New Grounds of Rejection are introduced (see rejection below).

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

3. Claims 13-29, 31-33, 35-37, 44-49 and 51-52 and 54 are rejected under 35 U.S.C. 102(b) as anticipated by Davis et al (US 6,033,514) and evidence given by Su et al (US 2003/0049474).

Regarding Applicant's Claims 13-29, 31-33, 35-37, 44-49, 51-52 and 54 Davis discloses film, comprising blend of polypropylene and wax (see abstract) and pointing out that polypropylene can be (see column 3, lines 1-15) isotactic polypropylene homopolymer or other polypropylene copolymers with MFI (melt flow rates) in range from 1 to 15 dg/min and suitable for sheet and film extrusion (see column 3, lines 1-15).

Regarding wax (or second polymer P(j) in Applicant's terms) Davis discloses that Polywax can be used in composition in a preferable range from 0.25% to 15 wt% (see column 3, lines 49-58) and exemplified use of Polywax in several working examples at 3.1 wt%, 5.0 wt%, 6.3wt% and 7.5 wt% (see Table I).

Note that Polywax meet all limitations of Claims 13, 31-33 and 35-38 as it poses linear structure, polydispersity of 1 to about 5 and  $M_n$  (Molecular weight) from 400 and density up to 0.98 g/cc (see evidence given by Su in paragraph [0031]-[0037]).

Regarding limitation of Claims 13, 31-33 related to degree of branching as " $< 3 \times 10^{-2}$ " note, that this language does not required any degree of branching. Therefore, polypropylene as substantially linear polymer and/or Polywax as linear low molecular weight polymer are inherently satisfied limitations of cited claims. Regarding method of blending Davis pointing out that "preferred blending devices are twin extruders and kneaders" - see column 4, lines 1-9.

Thus, all compositional limitations of Claims 13, 26 - 29, 31 -33, 35 -38, 44-48, 51-52 , 54 and process limitation of Claim 13 are satisfied.

Therefore, as substantially same composition disclosed by Davis will inherently have substantially same properties as Modulus, Elongation at break, Stress Yield and Melt flow as it required by Claims 14-25.

Thus Davis anticipates subject matter of Applicant's claims 13-29, 31-33, 35-37, 44-49 and 51-52 and 54.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al ( US 6,033,514) in view of Su et al.(US 2003/0049474) and in further view of Kokko (Metallocene-Catalyzed Ethene Polymerization: Long-Chain Branched Polyethylene, September 2002).

Discussion with respect to Davis and Su incorporated herein by reference.

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As it was discussed above (see paragraph 3) Davis disclosed use of different polypropylene polymers blended with Polywax for production of films, but silent regarding other polyolefin as for example, linear low density polyethylene.

However, Su teaches that composition, comprising non-polar polymer and Polywax, may comprise different polyolefins as ( see paragraph [0026]): " an isotactic polypropylene homopolymer, syndiotactic polypropylene homopolymer, metallocene catalyzed isotactic polypropylene homopolymer, ....low density polyethylene, linear low density polyethylene, very low density polyethylene, metallocene catalyzed polyethylene, metallocene catalyzed polyethylene copolymer.." useful for production films for food packaging ( see abstract).

Therefore, it would be obvious to one of ordinary skill to use other polyolefins, for example, linear low density polyethylene per teachings of Su in composition disclosed by Davis.

Thus, Davis in view of Su disclosed substantially same composition as claimed by Applicant in claims 38-41, including use of linear low density polyethylene and Polywax, but silent about length of the branching chains in polyethylene.

However, Kokko teaches that short chain branches, less than 40 carbon atoms will interfere with formation of crystal structure of polyethylene (see page 1, second paragraph) and when branch length increases they (chains) become able to form lamellar crystals.

Therefore, it would have been obvious to one ordinary of skill in the art at the time of the invention to use composition disclosed by Davis combined with Su, wherein

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polymer has long chain branching with length higher than 40 carbon atoms per teaching of Kokko, in order to increase overall crystallinity and probability for heterocrystallization with other polymers in composition.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 13-29, 31-33, 35-41, 44-49, 51, 52 and 54 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GENNADIY MESH whose telephone number is (571)272-2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272 1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MILTON I CANO/  
Supervisory Patent Examiner, Art Unit 1763

Gennadiy Mesh  
Examiner  
Art Unit 1763

/GM/